

§103(a) as being unpatentable over Engdahl and further in view of Gulick et al., U.S. patent 6,314,501 ("Gulick").

Applicant believes that the claimed invention is patentable over the cited art. Before discussing the claim language in detail and why Applicant traverses the claim rejections, Applicant believes it is useful to first discuss the motivation behind the invention, because such a discussion easily points out the novelty.

For economic reasons, it is desirable to integrate a MAC with the chipset normally used in a personal computer. Currently, chipsets utilize digital circuits, whereas a PHY uses analog circuits, so it is costly at this time to also integrate the PHY on a chipset. Accordingly, the PHY is still expected to be separate from the chipset, and may be provided by manufacturers other than the manufacture of the chipset. For the MAC to know which type of PHY it needs to communicate with, data identifying the PHY is stored in memory. The MAC needs to know where to access this stored identification information. This is not taught in the prior art, for the simple reason that the prior art was not concerned with the situation in which a MAC needed the flexibility to communicate with different kinds of PHYs perhaps made by different manufacturers.

35 U.S.C. §102(b) rejection of claims 1, 3, 5, 7, 9, 10, 11, and 12 over Engdahl

Claim 1 specifically recites a PHY comprising "a register to store a pointer to a memory location so as to provide identification information about the PHY." Nowhere does Engdahl teach or suggest this claim limitation. Specifically, reference is made in the Office Action to column 36, lines 1-12 of Engdahl. However, this portion of Engdahl refers to a trio of transmit FIFOs implemented in a RAM. In Engdahl, a set of storage locations containing pointers is set aside in RAM, where a pointer points to those storage locations in RAM containing the beginning and ending items of data within the FIFO. The transmit FIFOs act as data buffers for storing data that is to be transmitted. (See Engdahl, column 18, lines 14-23; and column 32, lines 10-13.) Nowhere does Engdahl teach that these FIFOs store identification information data about the PHY.

For the above reason, Applicant believes that claim 1 is not anticipated by Engdahl. A similar argument applies also to claims 3, 5, 7, 9, 10, 11, and 12 because they make reference to such a register or pointer. For example, claim 3 recites a MAC

comprising a PHY-to-MAC port to receive a signal indicative of a pointer to a memory location so as to provide identification information about the PHY.

Accordingly, Applicant respectfully believes that claims 1, 3, 5, 7, 9, 10, 11, and 12 are not anticipated by Engdahl.

35 U.S.C. §103(a) rejection of claims 2, 4, 6, and 8 over Engdahl and Findlater

As discussed above, all independent claims are believed patentable over Engdahl because Engdahl does not teach a register, or the use of a pointer, to point to identification information about the PHY. Findlater also does not teach this. Accordingly, claims 2, 4, 6, and 8 are believed to be patentable over Engdahl and Findlater whether taken separately or in combination.

Furthermore, Findlater never teaches that “the PHY-to-MAC words and MAC-to-PHY words are synchronized into pairs, wherein a pair comprises one MAC-to-PHY word and one PHY-to-MAC word” as recited in claim 2. It is well-known that in an Ethernet, a MAC and PHY exchange data via frames, which may be viewed as words. But in the present invention, the words passed from the MAC to the PHY are MAC-to-PHY words, and the words passed from the PHY to the MAC are PHY-to-MAC words. These MAC-to-PHY words have a different format from the PHY-to-MAC words. Findlater does not teach the use of PHY-to-MAC words and MAC-to-PHY words, and certainly does not teach that they be synchronized as pairs.

Similar claim language is found in claims 4, 6, and 8. Accordingly, Applicant believes that claims 2, 4, 6, and 8 are thereby further distinguishable over Engdahl and Findlater.

35 U.S.C. §103(a) rejection of claims 13, 14, and 15 over Engdahl and Gulick

Claims 13, 14, and 15 are dependent upon claim 9. As discussed previously, claim 9 is believed patentable over Engdahl. Gulick is cited merely for teaching a memory to store BIOS. Therefore, for the same reason as given with respect to claim 9, claims 13, 14, and 15 are believed patentable over Engdahl and Gulick.

Respectfully submitted,

Seth Z Kalson Dated: 3-6-03

Seth Z. Kalson

Reg. no. 40,670

Attorney for Applicants and Intel Corporation (Assignee)